

**Exhibit A**  
KRMJ-DT Technical Exhibit

TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RECONSIDERATION  
ROCKY MOUNTAIN PUBLIC BROADCASTING NETWORK, INC.  
TELEVISION STATION KRMJ-DT  
GRAND JUNCTION, COLORADO  
MB DOCKET NO. 87-268

This Technical Exhibit was prepared on behalf of Rocky Mountain Public Broadcasting Network, Inc. in support of a Petition for Reconsideration in MB Docket No. 87-268. This exhibit supports the modification of the allotment for KRMJ-DT, Grand Junction, Colorado (Channel 18) to reflect the facility that will actually be built for KRMJ-DT for the post-transition. It is demonstrated herein that KRMJ-DT's 'Appendix B' allotment facility can be modified to reflect its proposed facility parameters within the FCC's interference requirements.

The FCC 'Appendix B' allotment facility for KRMJ-DT specifies operation on Channel 18 with a maximum ERP of 51.2 kW with an antenna HAAT of 883 m (3050 m AMSL) with a directional antenna pattern ID of 74404. The geographic coordinates of the KRMJ-DT 'Appendix B' facility are 39-03-14 N. L. / 108-15-13 W.L. (NAD 27).<sup>\*</sup> This site is located on Grand Mesa about 26 kilometers east-southeast of Grand Junction and it is based on the former transmitter site of KRMJ(TV).<sup>†</sup>

The KRMJ(TV) analog Channel 18 facility and the KRMJ-DT digital Channel 17 facility have both been relocated and consolidated to a single antenna located on Black Ridge located about 16 km west-southwest of Grand Junction and about 42 km west of the KRMJ-DT 'Appendix B' allotment location. It is planned to use the existing KRMJ(TV)/-DT antenna for the post-transition operation of KRMJ-DT at the licensed Black Ridge location. Therefore, it is proposed that the KRMJ-DT 'Appendix B' allotment be modified as described herein. This will allow for a seamless transition to Channel 18 at the February 17, 2009 date for the digital transition.

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<sup>\*</sup> See Appendix B of the *Seventh Report and Order and Eighth Further Notice of Proposed Rule Making* in MB Docket No. 87-268, Released: August 6, 20007, FCC 07-148.

<sup>†</sup> See FCC File No. BLET-19970807KL.

The proposed 'Appendix B' specifications for the KRMJ-DT operation on Black Ridge are summarized in Figure 1. The facility is proposed to operate on Channel 18 with a maximum directional ERP of 51.2 kW with an antenna height above average terrain of 409 m (2204 m AMSL, 46 m AGL) and a directional antenna pattern ID of 72889. The geographic coordinates of the proposed KRMJ-DT 'Appendix B' allotment are: 39-03-58 N. L. / 108-44-43 W.L. (NAD 27). These match those specified for the licensed KRMJ(TV)/-DT site.<sup>†</sup>

Figure 1 is a summary data sheet that provides all the relevant technical specifications for the proposed KRMJ-DT allotment facility.

An engineering analysis was conducted to determine the predicted interference to all other licensee's potentially affected 'Appendix B' allotment facilities from the proposed KRMJ-DT facility. The analysis calculated the net new predicted interference according to the procedures outlined by the FCC in the *Second DTV Periodic Report and Order*<sup>‡</sup> and related Public Notices. The analysis results are summarized as follows:

**Analysis of Channel 18, KRMJ-DT, Grand Junction, CO (51.2 kW-DA, 2,204 m AMSL)**

Channel 18 KRMA-DT, Denver, CO  
*Proposal causes no interference.*

As indicated above, there is only one potentially affected allotment and that is for KRMA-DT, Denver, Colorado, which is located 309.1 km to the east-northeast. There is no interference predicted to KRMA-DT.<sup>§</sup> Based on the foregoing, it is concluded that the proposed 'Appendix B' allotment facility for KRMJ-DT as described

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<sup>†</sup> See FCC File Nos. BLEDT-20060630ABE and BLET-20061107ACK.

<sup>‡</sup> *Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, MB Docket No. 03-15, Report and Order, 19 FCC Rcd 18279, 18281 (2004).

<sup>§</sup> It is noted that KRMA-DT is also licensed to Rocky Mountain Public Broadcasting Network, Inc. and it hereby consents to the KRMJ-DT proposal as described herein.

above and in the attached Figure 1 would comply with the FCC 0.1% interference requirement.

Figure 2 is a map showing the predicted 41 dBu, f(50,90), and 48 dBu, f(50,90), coverage contours. Proper coverage of Grand Junction is evident from the map. Furthermore it is evident from inspection of Figure 2 that the 41 dBu, f(50,90) contour extension of the proposed facility relative to the present 'Appendix B' allotment facility for KRMA-DT is minimal and of no practical consequence.

Based on the forgoing, it is requested that 'Appendix B' of the DTV table be amended to read as follows with respect to KRMJ-DT:

Facility ID	State and City		NTSC	DTV								
			Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thousand)	% Interference Received
14042	CO	GRAND JUNCTION	18	18	51.2	<u>409</u>	<u>72889</u>	<u>390358</u>	<u>1084443</u>	<u>14137</u>	<u>132</u>	0

See Figure 1 for additional technical details.



Louis R. du Treil, Jr., P.E.

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
Sarasota, Florida 34237

October 26, 2007

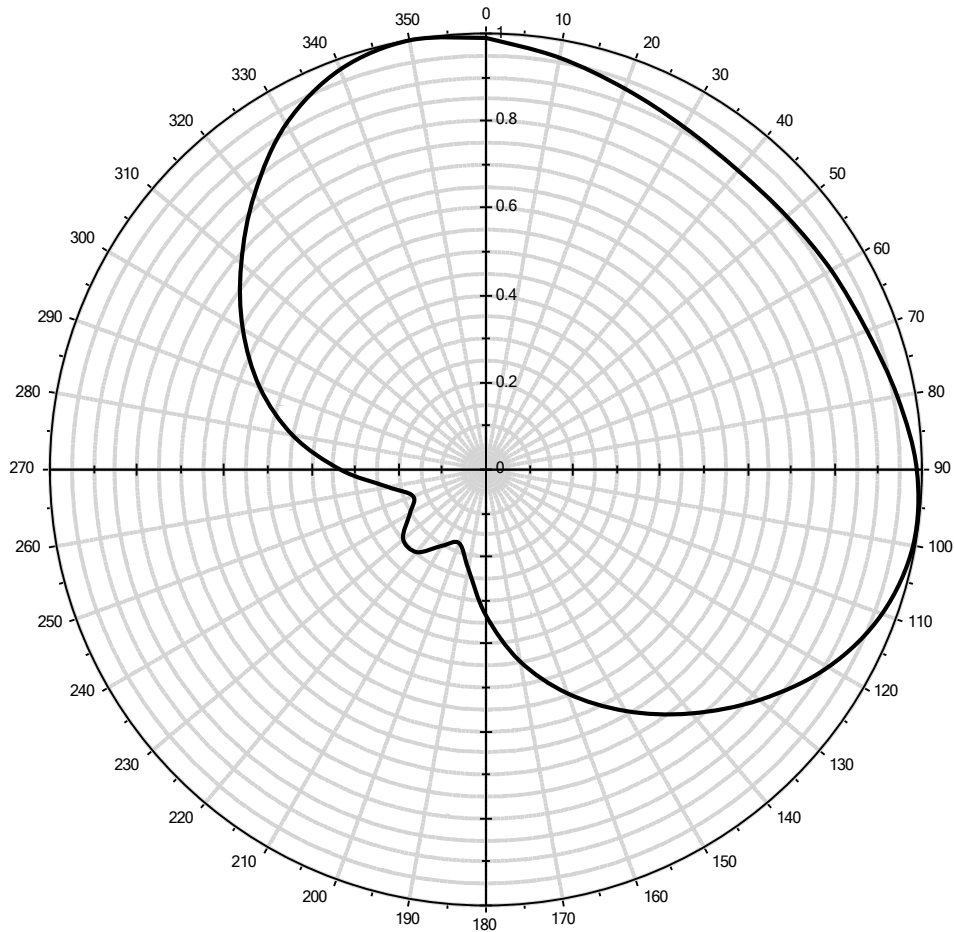
# DA Inquiry

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



**Antenna Pattern:** Antenna ID: 72889

**Proposed KRMJ-DT Allotment**  
**Grand Junction, CO**  
**Channel 18, 51.2 kW (Max-DA)**  
**409 m HAAT, 2204 m AMSL**  
**39-03-58 NL / 108-44-43 WL**



**Note:** display reflects rotation of 0.00°

**Antenna Details:**

0°	0.990	60°	0.914	120°	0.906	180°	0.335	240°	0.202	300°	0.644
10°	0.960	70°	0.930	130°	0.821	190°	0.232	250°	0.178	310°	0.733
20°	0.930	80°	0.958	140°	0.730	200°	0.180	260°	0.229	320°	0.826
30°	0.908	90°	0.988	150°	0.639	210°	0.202	270°	0.334	330°	0.916
40°	0.897	100°	0.995	160°	0.546	220°	0.247	280°	0.449	340°	0.977
50°	0.902	110°	0.967	170°	0.446	230°	0.248	290°	0.552	350°	1.000

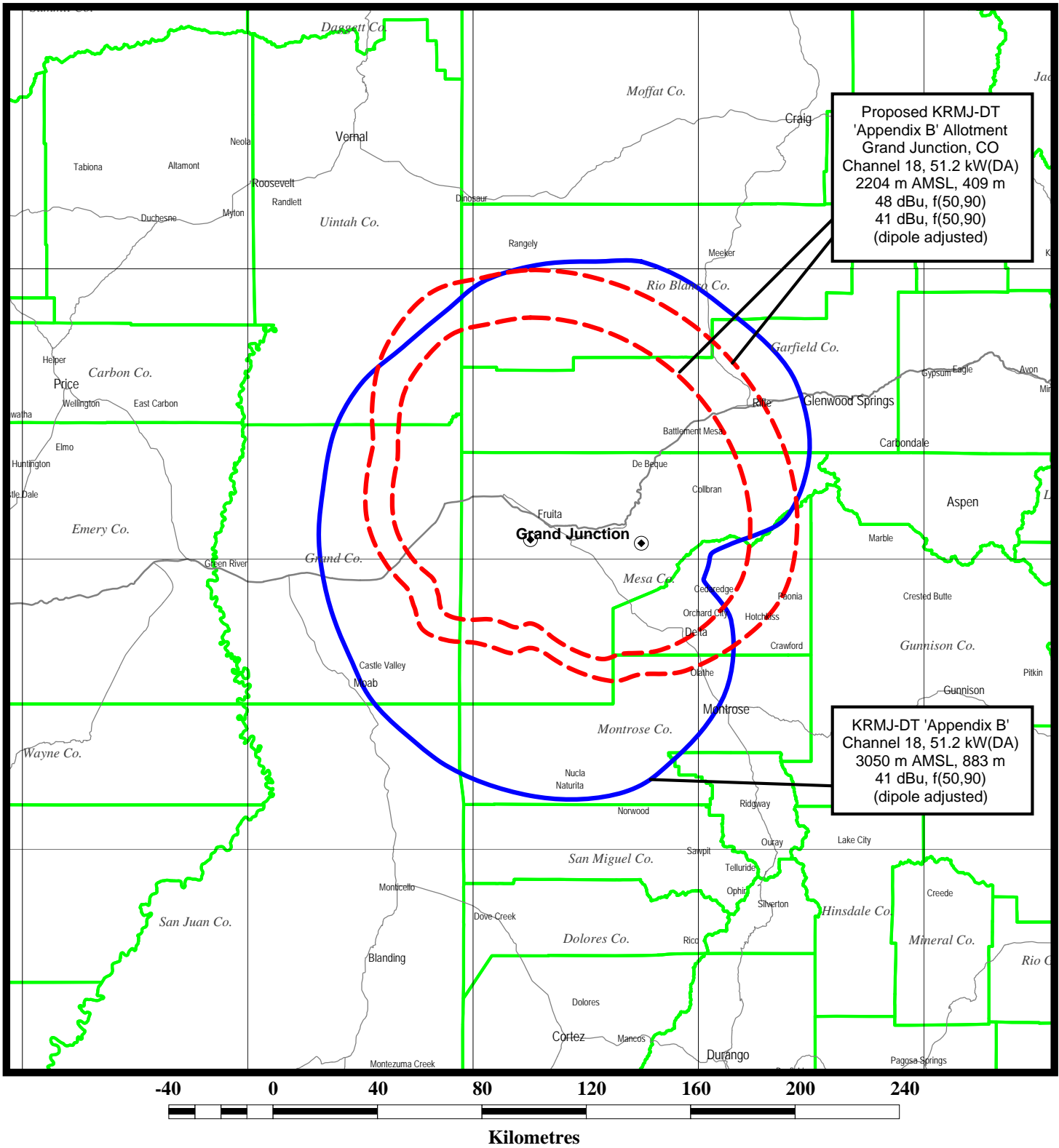
**Antenna Make:** DIE

**Standard Pattern:**

**Antenna Model:** TFU-8DSB-M DC

**Last Change Date:**

Figure 2



## PREDICTED COVERAGE CONTOURS

duTreil, Lundin & Rackley, Inc. Sarasota, Florida

**Exhibit B**  
KTSC-DT Technical Exhibit

TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RECONSIDERATION  
ROCKY MOUNTAIN PUBLIC BROADCASTING NETWORK, INC.  
TELEVISION STATION KTSC-DT  
PUEBLO, COLORADO  
MB DOCKET NO. 87-268

This Technical Exhibit was prepared on behalf of Rocky Mountain Public Broadcasting Network, Inc. in support of a Petition for Reconsideration in MB Docket No. 87-268. This exhibit supports the modification of the allotment for KTSC-DT, Pueblo, Colorado (Channel 8) to reflect the facility that will actually be built for KTSC-DT for the post-transition. It is demonstrated herein that KTSC-DT's 'Appendix B' allotment facility can be modified to reflect its proposed facility parameters within the FCC's interference requirements.\*

The FCC 'Appendix B' allotment facility for KTSC-DT specifies operation on Channel 8 with a maximum ERP of 20.3 kW with an antenna HAAT of 727 m (2964 m AMSL) with a directional antenna pattern ID of 74992. The geographic coordinates of the KTSC-DT 'Appendix B' facility are 38-44-44 N. L. / 104-51-39 W.L. (NAD 27).†

The KTSC(TV) analog Channel 8 facility is currently licensed for operation on Cheyenne Mountain near Colorado Springs. It is planned to relocate the KTSC-DT post-transition facility back to KTSC's originally licensed analog site on Baculite Mesa near Pueblo. The present antenna for KTSC, a Dielectric model THV-6A8-R C160, which is currently employed for its analog operation, will be

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\* The present KTSC-DT 'Appendix B' allotment from the FCC's *Seventh Report and Order* is subject to predicted interference of 56.5%. Its allotment has the HIGHEST level of received interference of any of the 1,823 digital television allotments. The instant proposal will reduce the predicted interference to the KTSC-DT 'Appendix B' allotment to 0.1%.

† See Appendix B of the *Seventh Report and Order and Eighth Further Notice of Proposed Rule Making* in MB Docket No. 87-268, Released: August 6, 20007, FCC 07-148.



relocated to its former Baculite Mesa tower site. This is an existing tower with FCC ASRN 1022894.<sup>‡</sup>

The proposed ‘Appendix B’ specifications for the KTSC-DT operation on Baculite Mesa are summarized in Figure 1. The facility is proposed to operate on Channel 8 with a maximum directional effective radiated power (ERP) of 105 kW with an antenna height above average terrain of 372 m (1888 m AMSL, 260 m AGL) and a directional antenna pattern ID of 32868, but with a pattern rotation of 120°. The geographic coordinates of the proposed KTSC-DT ‘Appendix B’ allotment are: 38-22-25 N. L. / 104-33-27 W.L. (NAD 27). These match those specified for former KTSC analog site.<sup>§</sup>

Figure 1 is a summary data sheet that provides all the relevant technical specifications for the proposed KTSC-DT allotment facility.

An engineering analysis was conducted to determine the predicted interference to all other licensee’s potentially affected ‘Appendix B’ allotment facilities from the proposed KTSC-DT facility. The analysis calculated the net new predicted interference according to the procedures outlined by the FCC in the *Second DTV Periodic Report and Order*<sup>\*\*</sup> and related Public Notices. The analysis results are summarized as follows:

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<sup>‡</sup> The antenna structure registration information lists the ground elevation of the tower site to be 1,327.6 m AMSL. This is incorrect. Based on the FAA determination for the site (FAA Study No. 84-ANM-725-OE) and topographic map resources, the correct site elevation is 1,627.6 m AMSL. It is hoped that this will be corrected by the owner of the structure in the near future.

<sup>§</sup> See FCC File No. BLET-270.

<sup>\*\*</sup> *Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, MB Docket No. 03-15, Report and Order, 19 FCC Rcd 18279, 18281 (2004).

**Analysis of Channel 8, KTSC-DT, Pueblo, CO (105 kW-DA, 1,888 m AMSL)**

Channel 7 KMGH-DT, Denver, CO – Baseline: 2,956,719  
*Predicted New IX: 24,720, 0.84%; Less than predicted by present  
'Appendix B' allotment facility, which is 57,514, or 1.95%.*

Channel 8 KSWK-DT, Lakin, KS  
*Proposal causes no interference.*

Channel 8 KOFT-DT, Farmington, NM  
*Proposal causes no interference.*

Channel 8 KACV-DT, Amarillo, TX  
*Proposal causes no interference.*

Channel 8 KWYP-DT, Laramie, WY – Baseline: 109,864  
*Predicted New IX: 44, 0.04%; Less than 0.15% interference.*

Channel 9 KUSA-DT, Denver, CO  
*Proposal causes no interference.*

Based on the foregoing, it is concluded that the proposed 'Appendix B' allotment facility for KTSC-DT as described above and in the attached Figure 1 would comply with the FCC 0.1% interference requirement.

Figure 2 is a map showing the predicted 43 dBu, f(50,90), and 36 dBu, f(50,90), coverage contours. Proper coverage of Pueblo is evident from the map.

Based on the forgoing, it is requested that 'Appendix B' of the DTV table be amended to read as follows with respect to KTSC-DT:

Facility ID	State and City		NTSC	DTV								
			Chan	Chan	ERP (kW)	HAAT (m)	Antenna ID	Latitude (DDMMSS)	Longitude (DDMMSS)	Area (sq km)	Population (thousand)	% Interference Received
69170	CO	PUEBLO	8	8	<u>105</u>	<u>372</u>	<u>32868</u>	<u>382225</u>	<u>1043327</u>	<u>32620</u>	<u>752</u>	<u>0.1</u>

See Figure 1 for additional technical details.



Louis R. du Treil, Jr., P.E.

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
Sarasota, Florida 34237

October 25, 2007

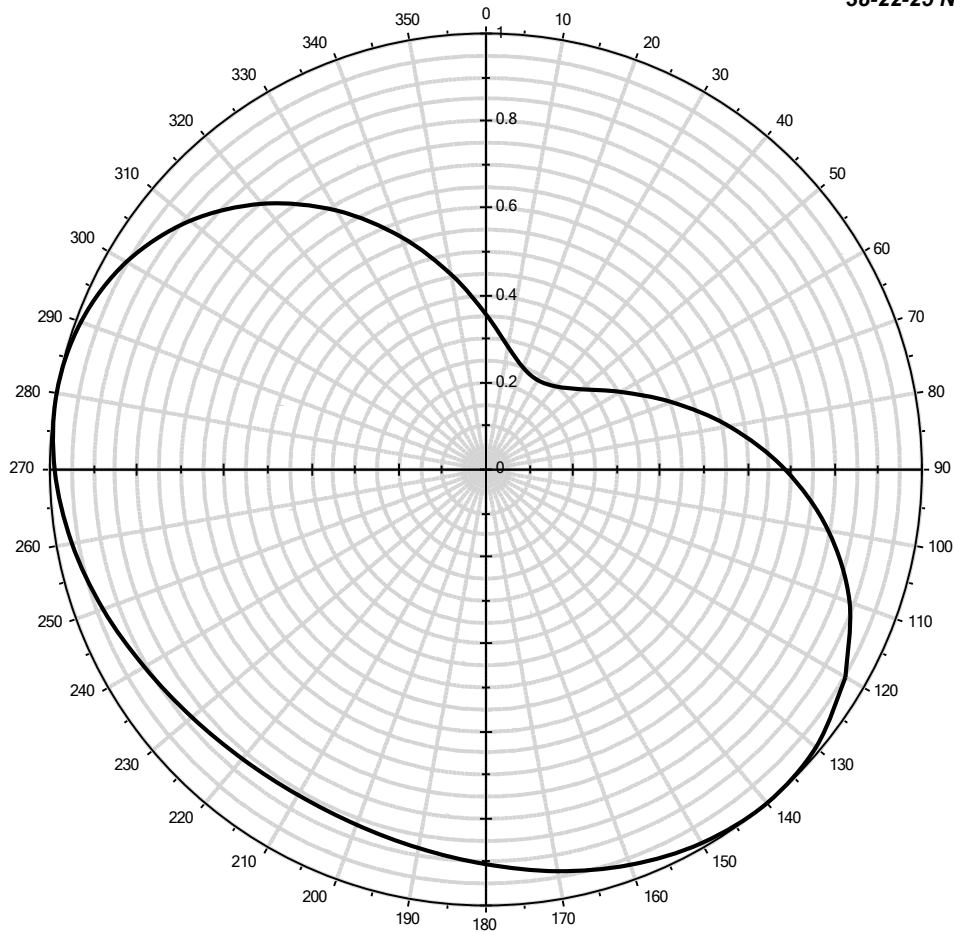
# DA Inquiry

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



**Antenna Pattern:** Antenna ID: 32868

**Proposed KTSC-DT**  
**'Appendix B' Allotment**  
**Pueblo, CO, Channel 8**  
**105 kW (Max-DA), 372 m HAAT**  
**1888 m AMSL**  
**38-22-25 N.L. / 104-33-27 W.L.**



**Note:** display reflects rotation of 120.00°

**Antenna Details:**

0°	0.952	60°	0.905	120°	0.905	180°	0.952	240°	0.356	300°	0.356
10°	0.989	70°	0.882	130°	0.935	190°	0.887	250°	0.287	310°	0.453
20°	1.000	80°	0.867	140°	0.965	200°	0.796	260°	0.249	320°	0.568
30°	0.989	90°	0.862	150°	0.989	210°	0.686	270°	0.237	330°	0.686
40°	0.965	100°	0.867	160°	1.000	220°	0.568	280°	0.249	340°	0.796
50°	0.935	110°	0.882	170°	0.989	230°	0.453	290°	0.287	350°	0.887

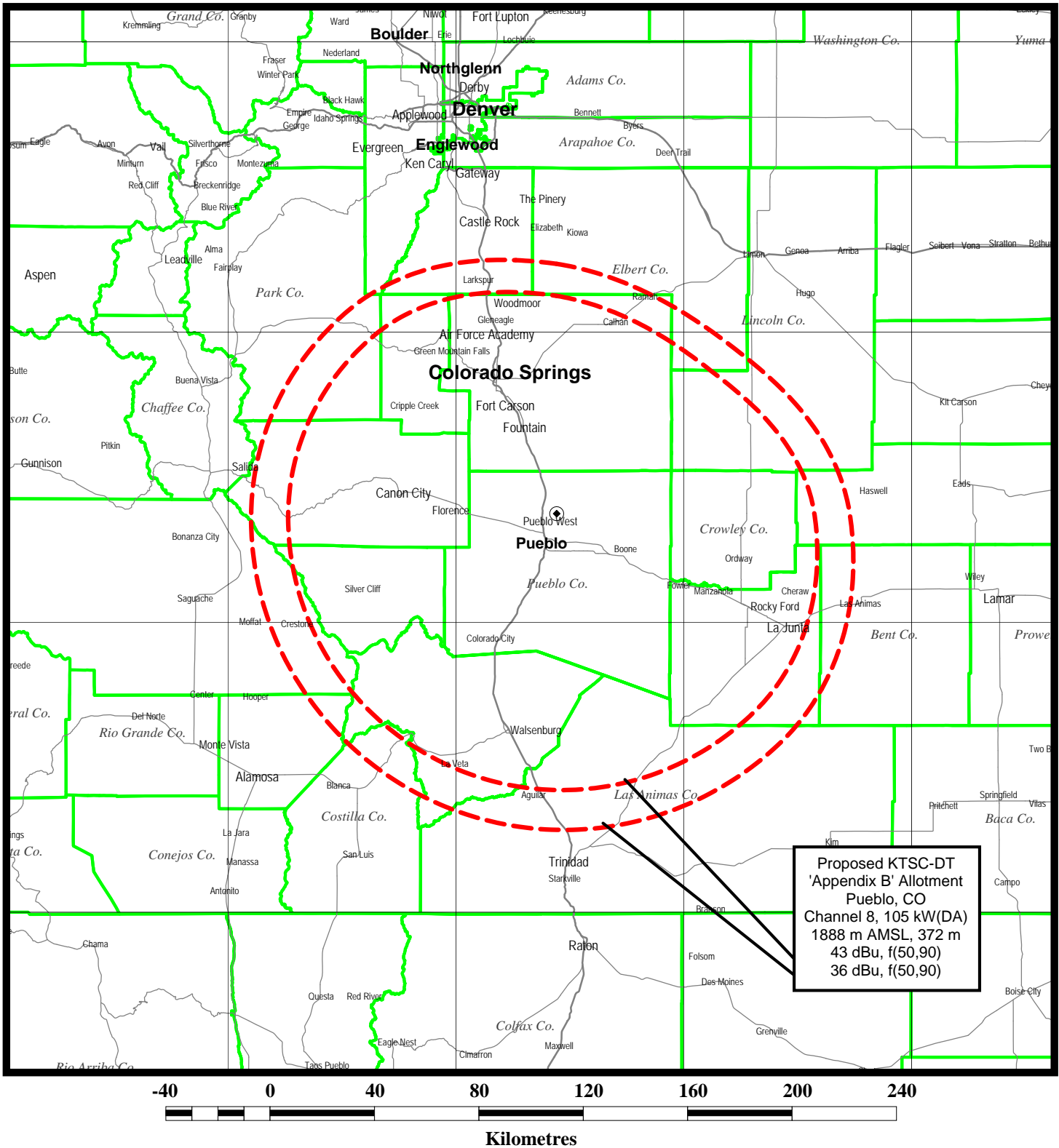
**Antenna Make:** DIE

**Standard Pattern:**

**Antenna Model:** THV-6A8-R C160

**Last Change Date:** 5/8/2000

Figure 2



## PREDICTED COVERAGE CONTOURS

duTreil, Lundin & Rackley, Inc. Sarasota, Florida